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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,844	10/19/2001	Kuang-Chien Chen	M-12149 US	6729

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EXAMINER

LEVIN, NAUM B

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,844

Applicant(s)

CHEN ET AL.

Examiner

Naum B Levin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/15/03 (Amendment, Paper No. 6).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 5-17 and 22-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to application 10/037,844 and amendment filed on 04/15/2003. Claims 1-44 remain pending in the application.

2. Applicant has amended claims 5, 7, 10, 11, 13, 22, 24, 27, 28 and 30, and added new claims 35-44.

Based on the amendment Examiner performed additional search, and has found a new reference.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Morgan (US Patent 6,530,073).

Morgan discloses RTL annotation tool for layout induced netlist changes including:

(1), (18) A method and computer readable storage medium with stored program for modeling a circuit design comprising:

synthesizing a circuit design to create a first gate-level representation of the circuit design/gate-level netlist of the original circuit/pre-layout netlist/pre-ECO netlist (col.6, ll.52-61);

analyzing a second gate-level representation of the circuit design/new gate-level netlist/post-layout netlist to learn architecture information (col.8, ll.34-67; col.9, ll.1-12 and Abstract); and

resynthesizing/changing the first gate-level representation of the circuit design to incorporate the learned architecture information from the second gate-level representation of the circuit design (col.11, ll.29-36 and ll.41-59);

(2), (19) The method and computer readable storage medium with stored program, wherein the second gate-level representation being created during a synthesis process (col.8, ll.12-17);

(3), (20) The method and computer readable storage medium with stored program, wherein the learned architecture information comprises logic network architecture in the second gate-level representation of the circuit design (col.8, ll.34-39);

(4), (21) The method and computer readable storage medium with stored program, wherein the analyzing comprises a resource sharing learning (col.8, ll.34-67 and col.9, ll.1-12 and col.10, ll.5-14).

Allowable Subject Matter

4. Claims 5-17 and 22-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest or render obvious:

A method for modeling a circuit design, wherein the resource sharing learning comprising:

creating one or more resource pairs from sharable resources in the first gate-level representation of the circuit design; for each of the one or more resource pairs,

synthesizing a subcircuit that shares the resource pair;

for each of the synthesized subcircuits, calculating a similarity with a

corresponding subcircuit in the second gate-level representation of the circuit design; and

identifying the synthesized subcircuits having a high similarity with the corresponding subcircuit in the second gate-level representation of the circuit design.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pedersen et al. (US Patent 6,490,717) teaches a technique for performing an incremental recompile (resynthesizing) of an electronic design that has been previous compiled and then changed by a designer.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naum B Levin whose telephone number is 703-305-0144. The examiner can normally be reached on M-F (8:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

N L *NC*
June 9, 2003

[Signature]
P. M. Thompson
Patent Examiner
TECHNOLOGY CENTER 2800